

1-5 (canceled)

6. (New) Intramedullary nail, which is specially designed to secure and immobilise fractures in long bones having a medullary cavity of a given length such as the femur, said nail consisting of the functional combination of a tubular nail (1-2-3-2') and a probe (4) that can move axially inside of said tubular nail (1-2-3-2'), which includes a node (3) and a plurality of thin rods (2) of a length less than said given length extending distally, which are grouped according to an imaginary cylindrical surface and converge towards the node (3), beyond which they extend in wide sections (2') that are independent at their free ends, whilst the probe (4) includes a protrusion (5) close to its distal end, which is initially situated outside the tubular nail, **characterised in that** the tubular nail further includes a head (1) at its proximal end, from which the plurality of thin rods (2) extend distally and the protrusion (5) first causes the radial deformation of the wide sections (2') of the rods (2) during the axial movement of the probe relative to the tubular nail and then causes the node (3) to move towards the head (1), which in turn causes a radial expansion of the tubular nail in the proximal area at its rods (2).

7. (New) An assembly including a support (6) and an intramedullary nail according to claim 6, **characterised in that** the support (6) works with the head (1) of the tubular nail, being the only element of the assembly that is fixed by screws to the bone, specifically at the proximal end thereof, this support (6) having a stepped axial hole (8) for attachment of the head (1) and a radial fin (9) with a pair of holes (10) for screwing the support to the bone.

8. (New) An assembly according to claim 7, **characterised in that** inside the axial hole (8) in the support (6), specifically at the outer end thereof, there is a threaded section (12) for the attachment of a template for drilling into the bone, which is situated in line with the holes (10) of the support (6), and for the subsequent implantation of a collar (13) that can move the threaded rod (4) that constitutes the probe in order to displace the protrusion (5) thereon towards the head (1) of the tubular nail.

9. (New) An assembly according to claim 5 for use in a bone having spongy tissue lining its medullary cavity, **characterised in that** said independent free ends of said wide sections (2') of said thin rods (2) are adapted to almost reach a perpendicular position relative the bone, to be driven into the spongy tissue lining the medullary cavity.